CLAIMS

1. An optical unit, comprising: a plurality of transparent blocks; and a plurality of dichroic films that are different in wavelength range of a reflectible light beam,

wherein the plurality of transparent blocks are connected in a row so that any of the plurality of dichroic films may be interposed between the respective transparent blocks, and the plurality of dichroic films may be in parallel to each other.

2. The optical unit according to Claim 1, wherein the plurality of dichroic films have characteristics of reflecting only light beams with certain wavelengths or longer, and are arranged in order of minimum wavelength of the reflectible light beam.

3. The optical unit according to Claim 1, wherein the plurality of dichroic films have characteristics of reflecting only light beams with certain wavelengths or shorter, and are arranged in order of maximum wavelength of the reflectible light beam.

4. The optical unit according to Claim 1, wherein a total reflection film, instead of the dichroic film, is interposed between the transparent block at one end of the row of the plurality of transparent blocks and the transparent block connected to the transparent block at the end of the row.

5. An optical sensor, comprising: an optical unit which comprises a plurality of transparent blocks and a plurality of dichroic films that are different in wavelength range of a reflectible light beam; and a photoreceptor that comprises a plurality of photoreceptive surfaces arranged in a row,

wherein the plurality of transparent blocks are connected in a row so that the plurality of dichroic films may be in parallel to each other, and any of the plurality of dichroic films may be interposed between the respective transparent blocks, and

the optical unit is disposed so that a light beam incident from the transparent block disposed at one end of the row of the plurality of transparent blocks may be reflected by any of the plurality of dichroic films and may be incident upon any of the plurality of photoreceptive surfaces.

6. A multichannel photodetector, comprising at least a reaction container, a plurality of light emitting devices that are different in wavelength of an emitted light beam, a first optical unit, a second optical unit and a plurality of photoreceptors,

wherein the plurality of light emitting devices are arranged in order of wavelength of the emitted light beam so that output directions of the respective light emitting devices may be in parallel,

the plurality of photoreceptors are arranged so that photoreceptive surfaces of the respective photoreceptors may be in parallel,

the first optical unit and the second optical unit respectively comprise a plurality of transparent blocks and a plurality of dichroic films that are different in wavelength range of a reflectible light beam, the plurality of transparent blocks are connected in a row so that the plurality of dichroic films may be in parallel to each other and any of the plurality of dichroic films may be interposed between the respective transparent blocks,

the first optical unit is disposed so that each of the light beams emitted by the plurality of light emitting devices may be reflected by any of the plurality of dichroic films according to the wavelength of the emitted light beam, and may be output from the first optical unit along the same optical path, and

the second optical unit is disposed so that each of light beams output

from an inside of the reaction container may be reflected by any of the plurality of dichroic films and may be incident upon any of the plurality of photoreceptors according to a wavelength of the light beam.

7. A method for manufacturing an optical unit that comprises at least a plurality of transparent blocks and a plurality of dichroic films that are different in wavelength range of a reflectible light beam, comprising at least the steps of:

(a) providing the dichroic film on one flat surface of a first transparent member that comprises at least the one flat surface;

(b) connecting a second transparent member including at least two parallel flat surfaces to the dichroic film so that one of the two flat surfaces may face the dichroic film, and the other one of the two flat surfaces may be provided with another dichroic film different from the dichroic film;

(c) connecting another first transparent member different from the first transparent member to the another dichroic film that is positioned as a top layer by one flat surface of the another first transparent member;

(d) cutting a connected body obtained by the steps (a) to (c) along: a first plane that intersects the one flat surface of the first transparent member, the one flat surface of the another first transparent member and the two flat surfaces of the plurality of second transparent members; and a second plane that is parallel to the first plane.

8. The method for manufacturing an optical unit according to Claim 7, comprising the step of connecting a second transparent member which comprises at least two parallel flat surfaces to the dichroic film so that one of the two flat surfaces may face the dichroic film, and providing another dichroic film different from the dichroic film to the other one of the two flat surfaces, instead of the step (b).

9. The method for manufacturing an optical unit according to Claim 7, comprising providing a total reflection film instead of the dichroic film in the step of (a), alternatively, providing a total reflection film instead of the another dichroic film that is positioned as the top layer in the step of (b).